Index to Volume XXXVII

September 1910 --- February 1911

Acid Bronze for Silver Smelters..... 271
Acid-Resisting Iron Castings..... 144
Aeroplanes, Alloys For..... 162
Air Furnace for Malleable Castings..... 91
Alkali-Resisting Bronze 270
Alloy, Aluminum Bearing..... 116
Allooy for Bearings 17
Alloy of Copper and Chromium..... 24
Alloys, Antimony in 74
Alloys, Brass 33
Alloys, Common Defects in..... 74
Alloys, Heat Treatment of..... 74
Alloys of Nickel and Cobalt with Chromium 17
Alloys, Shrinkage of.....73, 121
Aluminum Alloys 181
Aluminum as a Deoxidizer..... 118
Aluminum Bearing Alloy 116
Aluminum Bronze Cylinders..... 256
Aluminum Bronze, Details of Tests..... 258
Aluminum Bronze Valve..... 256
Aluminum Castings, Blow-Holes in..... 19
Aluminum for Carburetors..... 269
Aluminum for Marine Work..... 227
Aluminum Foundry, A Progressive..... 116
Aluminum in Babbitt, Determination of... 169
Aluminum in Scrap 22
Aluminum Patterns ...t..... 157
Aluminum, Pin Holes in..... 225
Aluminum, Shrink-Holes in..... 270
Aluminum Turnings, Melting 122
American Black-heart Malleable Iron Process 31
Analysis and Physical Properties of Bronze 81
Annealing Malleable Iron, Changes During 30
Annealing Malleable Iron, Experiments in. 215
Anthony Co.'s Fuel Oil Furnace..... 38
Anti-Friction Alloy 219
Arrangement of Molding and Casting Pits in Continuous Cast Iron Pipe Shop.... 188
Arrangement of Steel Converter and Cupola 206
Associated Foundry Foremen..... 101
Automobile Cylinder Cores..... 63
Autumn Meeting of the Institute of Metals 73
Axle Bearings for Electric Cars, Method of Molding 15

B

Babbitt Dross 169
Babbitt Metal 181
Babbitt Metal, Data Sheet No. 81, January, 1911.
Babbitt Zinc 16
Bars, Commutator 77
Bearing Alloy 17
Bearing Bracket 100
Bearings, Journal 122
Bearing Metal 164
Bearings, Molding Axle 15
Bedstead Work, Gray Iron Mixture for.. 114
Beehive Coke 200
Beryllium 163
Birmingham Foundrymen's Association.... 181
Blemishes on Brass Castings..... 222
Blending and Mixing Plant for Steel Foundries 235
Blow-Holes From Chills 114
Blow-Holes in Aluminum Castings 19
Book Reviews:—
American Producer Gas Practice..... 180
Cupola Furnace, The 37
General Foundry Practice 128
Laboratory Experiments in Metallurgy. 37
Practical Alloying 128
Precis De Fonderie..... 37
Self-taught Mechanical Drawing and Elementary Machine Design..... 180
Taschenbuch fur Eisenhuttenleute..... 180
Boron Suboxide for Making Copper Castings of High Conductivity..... 219
Brake Shoes, Mixture for..... 134
Brass Alloys 33
Brass Bushings 227
Brass Bushings, Methods of Molding..... 250
Brass Castings, Blemishes on 222
Brass Castings, Dipping 5
Brass Castings, Finishing 1
Brass Castings for High Pressures..... 255
Brass Castings, Inspection of 155
Brass Castings, Plating 1
Brass Couplings 152, 227
Brass, Crystalization of 21
Brass Ferrules 76
Brass, Flux for 21
Brass Foundry, Cross-Section and Plan of. 175
Brass Foundry, Ground Plan and Sectional Elevation of 165
Brass Foundry Layout 165
Brass Foundry, Metallography in the..... 77
Brass Foundry Practice, Discussion of ... 121
Brass Foundry Progress 71
Brass for Fittings 20
Brass Furnace, A New 171
Brass, Heat Treatment of 121
Brass, Iron in 20
Brass on Iron, Method of Casting..... 168
Brass, Scrap Pile, The—I..... 21
Brass Scrap Pile, The—I..... 21
Brass Scrap Pile, The—III 169
Brass Valves and Fittings, Method of Gating 120
Brass Valves, Making Patterns for..... 165
Briquetting Cast Iron Borings..... 44
Briquetting Cast Iron Borings with Cement 64
British Foundrymen, Convention of..... 25
Bronze Bearings 269
Bronze for Machinery Castings.....Data Sheet No. 78, November, 1910
Bronze for Patterns 122
Bronze, Lumen 83
Bronze, Manganese 20
Bronze, Statuary, Data Sheet No. 82, January, 1911.
Brown Specialty Machinery Co., Coremaking Machine 130
Buffalo Foundry Foremen..... 276
Buffalo Foremen Organize..... 185
Buffalo Forge Co., Description of Turbine Blowers 88
Burned Iron 203
Burned Iron in the Cupola..... 201
Burner, Gas, for Mold Drying Oven.....14
Burning-On Job, A..... 24
Burnt Malleable Iron, Extreme Samples of 239
Business Man in a Steel Foundry, The.... 56

C

Cabbaging Press 131
Calcium in Aluminum..... 225
Calcium Silicide as a Flux for Aluminum Bronze 260
Carbo 279
Carburetors, Aluminum for..... 269
Car Wheels, Mine 50
Cast Copper of High Electric Conductivity. 218
Cast Iron Borings, Briquetting 44
Cast Iron Borings, Utilization of 220
Cast Iron, Combined Carbon in..... 53
Cast Iron, Examples of Strong..... 54
Cast Iron, Fluidity of 142
Cast Iron, Fractured Ring of..... 240
Cast Iron, Fusibility of 141
Cast Iron, Hardness Tests of..... 34
Cast Iron Liners 171
Cast Iron, Melting Points of..... 142
Cast Iron, Physical Properties of..... 141
Cast Iron Pipe Foundry, Continuous..... 187
Cast Iron, Resistance to Corrosion..... 144
Cast Iron, Shot in 125
Cast Iron, Stretch of 141
Cast Iron, The Physical Properties of..51, 104
Cast Iron, The Pouring Temperature of... 53
Casting Brass on Iron..... 168
Castings for High Pressures, Brass..... 255
Casting Large Propellers in Monel Metal.. 70
Casting, Properties of Iron..... 145
Castings, Acid-Resisting Iron 144
Castings Exposed to High Temperatures.. 143
Castings, Gases in Steel..... 133
Castings, Graphite Surface on..... 50
Castings, Machinery 116
Castings, Malleable 55
Castings, Phosphor Bronze 165
Cast Steel Tool Rest..... 249
Cauldron for Melting Wax..... 267
Cement in Briquetting Cast Iron Borings. 64
Centrifugal Pump Casing, Skeleton Pattern of 156
Chaplets 83
Chart, Shrinkage 114
Cheap Alloy for Valves and Fittings..... 121
Cheap Alloys 227
Cheap Method of Making Pattern Plates.. 158
Chemistry, Easy Lessons in....23, 72, 170, 261
Chilled Iron 106
Chilled Rolls 204
Chilling Mixture, Cast Iron..... 214
Chills, Blow-Holes From..... 114
Chromium Alloy 221
Chromium and Cobalt..... 19
Cincinnati Founders Organize..... 276
Clarus Metal 208
Clay Crucibles, Manufacture of..... 140
Cliff Fuel Oil Crucible Furnace..... 88
Clow & Sons. James B., Description of Coshocton Plant 187
Cobalt, Alloy of, with Nickel and Chromium.. 17
Cobalt, History of..... 17
Coke and Its Properties..... 27
Coke Bed, Thickness of in Cupola..... 202
Coke, Beehive 200
Coke Districts of the United States..... 204
Coke, Methods of Making..... 200
Coke Samples, Preparation of..... 159
Coke, Sampling 159
Coke, Tests at St. Louis..... 201
Coke, The Production and Use of Foundry. 200
Combined Gray Iron and Steel Foundry, Plan of 172
Common Defects in Alloys..... 74
Commutator Bars, Copper..... 77
Cone Pulley 100
Condenser Heads 123
Conductivity of Cast Copper..... 218
Continuous Cast Iron Pipe Foundry..... 187
Convention, Osborn 279
Convention Plans 125
Copper and Chromium Alloy..... 24
Copper Castings 164
Copper Castings of High Conductivity.... 20
Copper, Impurities in Tough-Pitch..... 117
Copper-Manganese-Aluminum Alloys 75
Copper-Phosphor, Photo-Micrograph of..... 78
Core Box for Valves..... 165
Core Boxes, Quickly-Made..... 272
Core-Forming Machine for Water Pipe Cores. 194
Core Machine 43
Core Mixture 63
Core Molding Machine, Power-Ramming Roll-Over 84
Core Ovens 245
Core Room, Arrangement of..... 94
Core Room Equipment..... 109
Core Sand Mixer 281
Core Sand, Preparation of..... 40
Cored Molds 212
Coremaking Machine 129
Coremaking Machines, Modern 113
Cores, Automobile Cylinder..... 63
Cores, Details of Gating..... 162
Cores for Cast Iron Water Pipe..... 195
Cores for Globe Valves..... 123
Cores, Large Machine-Molded..... 218
Cores Made on a Jolt-Ramming Machine. 218
Cranes for Foundry Service..... 277
Crane, Installation of Foundry..... 42
Cross-Section of Straight Floor Cast Iron Car Wheel Foundry 174
Crucible Base 140, 164
Crucible, Metal Melting Furnace..... 171
Crucible Steel Casting Process, The..... 61
Crucible Steel Foundry in the Northwest, A 158
Crucible Steel, Melting with Coke..... 146
Crucible Steel Mixtures..... 42
Crucible Tongs, A Handy Pair of..... 262
Crystallization of Brass..... 21
Cupola, A Small..... 101
Cupola, An Acid-lined..... 29
Cupola, A Word About the..... 95
Cupola Charging 96, 201
Cupola Malleable..... 204
Cupola Melting Record, A 97-Hour..... 241
Cupola, Refining 134
Cupola Slags 28
Cylinder, Mixture for..... 24
Cylinder Mixtures 127
Cylinders, Defective..... 67
Cylinders, Marine Engine..... 68

D

Deep Patterns, Taper of..... 148
Defective Cylinders 67
Defects in Alloys, Discussion of..... 122
Details of Flask Hinge..... 94
Determination of Aluminum in Babbitt.... 169
Different Grades of Iron from One Heat.. 64
Difficulty with Marine Engine Cylinders... 68
Discussion of Brass Foundry Practice by the Institute of Metals..... 121
Dovetailing Loose Pattern Pieces..... 150
Draft of Patterns..... 147
Dross from Babbitt Metal..... 169
Dry Sand, Molding Branch Pipes in..... 151
Dull Iron 244
Duralum 162
Duralumin 162

E

Easy Lessons in Chemistry.....23, 72, 170
Easy Lessons in Chemistry..... 261
Editorial:—
A Foundry Gold Mine..... 36
Automobile Cylinders 82
Cylinder Mixtures 127
Foundry Engineer, The..... 173
Foundry Trade in 1910, The..... 228
Purchasing Steel Castings..... 127
Standardized Flasks 126
The Lonesome Nine..... 82
Pacific Coast Foundry Industry..... 274

Electrical Conductivity of Boronized Copper 219
Electrical Properties of Cast Iron..... 143
Electrical Steel Castings, Analysis of.... 207
Electric Furnace, The..... 31
Electric Cars, Molding Axle Brasses for.. 15
Elements of Pattern Construction—IV... 97
Elements of Pattern Construction—V.... 147
Elements of Pattern Construction—VI... 209
Elimination of Oxygen in Copper..... 218
Elmira Foundry Co.'s Power-Ramming Core Molding Machine..... 84
Engine Cylinders, Marine..... 68
Equipment of a 30-Ton Foundry..... 109
Erie Foundry Foremen..... 276
Examples of Strong Iron..... 54
Exhibit, Foundry..... 132
Exhibition Company 37
Exhibition of Foundry and Machine Shop Equipment 275
Experiments in Annealing Malleable Iron. 215
Experiments with Aluminum Bronze..... 259
Extruded Metal Scrap..... 22

F

Facing, Kerosene 64
Falk Co., Milwaukee, Description of Plant. 57
Ferrules, Brass 76
Fillets, Inartistic 11
Fine Brass Work 222
Finishing Brass Castings..... 1
Fittings and Valves, High Pressure..... 124
Fittings, Gating Brass Valves and..... 120
Flask Bar Tucker..... 232
Flask Hinge 94
Floor Pendant Hand Traveling Crane..... 278
Fluxes for Copper Castings..... 164
Flux for Brass..... 21
Fly Wheel Molding Without a Pattern.... 213
Formula for Oil Sand Matches..... 15
Formulas for Finding the Weights of Iron Castings, Data Sheets, Nos. 73 and 74, September, 1910.
Formulas for Finding the Weights of Iron Castings, Data Sheets Nos. 83 and 84, February, 1911.
Foundry, A Modern Steel..... 13
Foundry and Machine Exhibition Co., Election of Officers..... 125
Foundry, A Progressive Aluminum..... 116
Foundry Coke, The Production and Use of 200
Foundry, Continuous Cast Iron Pipe..... 187
Foundry Crane Installation..... 42
Foundry Exhibit 132
Foundry Foremen, Associated..... 101
Foundry Foremen, Buffalo..... 276
Foundry Foremen, Erie..... 276
Foundry Layouts, Typical Modern—I.... 47
Foundry Layouts, Typical Modern—II... 109
Foundry Layouts, Typical Modern—III.. 173
Foundry Layouts, Typical Modern—IV... 245
Foundry of 30 Tons Capacity, Layout for. 108
Foundry of 60 Tons Capacity, Layout for. 110
Foundry of 75 Tons Capacity, Layout for. 111
Foundry of 120 Tons Capacity, Layout for 112
Foundry Order System, A Simple..... 65
Foundry Practice, Course in..... 102
Foundry Supply Association..... 125
Foundry Supply Association, Dissolution of 177
Foundrymen, Convention of British..... 25
Foundrymen's Association, Birmingham.... 181
Foundrymen's Convention 125
Foundrymen's Meetings..... 107
Fox, Martin, Memorial Fund..... 275
Fractured Cast Iron Ring..... 240
Fracture, Judging Malleable Iron by..... 237
Fractures of Gun Metals..... 77
Fractures of Tensile Test Bars of Malleable Iron 216
Fuel Oil Furnace..... 88
Furnace, Anthony's Fuel Oil Crucible..... 39
Furnace, Crucible Steel Melting..... 61
Furnace, Heroult 32
Furnace, Portable 132
Furnace, The Electric 31
Furnaces, Pit 76
Fusibility of Cast Iron..... 141

G

Gas Burner for Heating Mold Drying Oven 14
Gas Burners Drying Pipe Molds..... 190
Gas Consumption for Melting Bronze..... 254
Gas Engine Crank Case, Burning-on a.... 24
Gases in Steel Castings..... 133
Gas, Use of in Melting Non-Ferrous Metals 253
Gate Cores for Casting Bronze Rings..... 161
Gating and Casting Large Bronze Rings.. 161
Gating Brass Valves and Fittings..... 120
Gear Patterns, Teeth for..... 160
General Electric Co., Description of Crane Installation in Foundry..... 42
General Industrial Notes..45, 90, 135, 185, 283
Grab Bucket, Description of..... 129
Graphitic Surface on Castings..... 50
Gray Iron Mixture for Bedstead Work.... 114
Gray Iron, Scale in..... 63
Grinding Burrs, Chilling Mixture for..... 214
Ground Plan and Cross-Section of Small Brass Foundry 175
Ground Plan and Sectional Elevation of Brass Foundry 165
Ground Plan of the Plant of James B. Clow & Sons, Coshocton, O..... 198
Gun Metal, Formula for..... 227
Gun Metals, Fractures of..... 77

H

Hand Molding Versus Machine Molding... 242
Hand Traveling Crane, Floor-Operated.... 278
Hardening Pots 64
Hardness Tests of Cast Iron..... 35
Hawley Down Draft Fuel Oil Crucible Furnace 88
Heads, Condenser, Mixtures for Bronze... 123
Heat, Different Grades of Iron from One.. 64
Heating, Ladle 14
Heat Treatment of Alloys 74
Heat Treatment of Brass..... 121
Heavy Duty Air Compressors 233
Herman Pneumatic Machine Co., Description of Jar-Ramming Machine..... 41
Heroult Furnace 32
High Conductivity, Copper Castings of.... 20
High Pressure Valves and Fittings..... 124
High Pressures, Brass Castings for..... 255
Hinge, Details of Flask..... 94
Hubs, Spongy Gear..... 244
Hydraulic Cylinders and Patterns of a Pipe Molding Machine..... 193

I

Illinois State Reformatory, Course in Foundry Practice 102
Impurities in Tough-Pitch Copper..... 117
Inartistic Fillets, How to Avoid Them.... 11
Inspecting Iron and Steel Castings..... 153
Institute of Metals, Autumn Meeting of... 73
Institute of Metals, Discussion of Brass Foundry Practice By..... 121
Intricate Steel Castings 138
Iron and Steel Castings, Inspecting..... 153
Iron and Steel Valves 60
Iron Borings, Cast, Briquetting..... 44
Iron Castings, Formulas for Finding the Weights of, Data Sheets Nos. 83 and 84, February, 1911.
Iron, Dull 244
Iron, Examples of Strong..... 54
Iron Foundry, Layout of from 5 to 20 Tons Capacity 47
Iron in Brass 20
Iron, Scale in Gray 63
Iron, Strong 68, 125
Iron, The Physical Properties of.....51, 104
Iron, The Pouring Temperature of..... 53
Iron, Pig, The Valuation of..... 55

J

Jar-Ramming Machine 41
Jarring Machines 114, 242
Job Shop for Light Steel Castings..... 205
Joint Patterns 98
Jolt-Ramming Core Machine..... 236
Jolt-Ramming Machine, Large..... 86
Jolt-Ramming Molding Machine for Thin Deep Castings 176
Journal Bearings 122
Judging Babbitt Metal 170
Judging Brass Scrap 21
Judging Malleable Iron by Fracture..... 237

K

Kerosene Facing for Cylinder Cores..... 64
Kerosene on Molds 133
Killing's, E., Molding Machine Works, New Rock-Over Machine..... 183

L

Ladle Heating 14
Large Jolt-Ramming Machine..... 86
Large Machine-Molded Cores..... 218
Large Steel Gear..... 244
Lawlor Molding Machine Co..... 83
Layout for a Foundry of 30 Tons Capacity 108
Layout for a Foundry of 60 Tons Capacity. 110
Layout for a Foundry of 75 Tons Capacity. 111
Layout for a Foundry of 120 Tons Capacity 112
Lead in High Pressure Alloys..... 124
Leaded Alloys 119
Light Steel Castings, Job Shop for..... 205
Light Weight Alloys for Aeroplanes..... 162
Limestone as a Flux..... 181
Limitations to Sweeping in Green Sand... 213
Limits to Size of Manganese Steel Castings 244
Liners, Cast Iron..... 171
Linseed Oil Sand Matches..... 145
Lithium 163
Locomotive Main Frames, Steel Castings for 137
Lost Wax Method, Production of Castings by 263
Lumen Bronze 83

M

Machine for Jolt-Ramming Cores..... 236
Machine for Molding Cast Iron Water Pipe 194
Machine, Jar-Ramming 41
Machine, Large Jolt-Ramming..... 86
Machine-Molded Cores, Large..... 218
Machine Molding versus Hand Molding... 242
Machine, No-Shock Jolt-Ramming Molding 131
Machinery Castings 116
Machines for Rolling and Mixing Sand... 184
Machines, Jarring 114
Machines, Modern Coremaking..... 113
Machines, Profiling..... 3
Machines, Rock-Over Drop..... 114
Machines, Stripping Plate..... 114
McPhee Match-Plate Process..... 278
Magnalium 162
Magnesium Alloys..... 163
Magnesium in Brass..... 119
Magnetic Alloys 75
Making Clay Crucibles 140
Making Globe Valve Cores in One Piece.. 123
Making Patterns for Brass Valves..... 165
Malleable Annealing Experiments..... 215
Malleable Castings 55
Malleable Foundry of 5 Tons Capacity.... 247
Malleable Foundry of 10 Tons Daily Capacity 246
Malleable Foundry of 100 Tons Daily Capacity 248
Malleable Iron, American Black-Heart Process 31
Malleable Iron, Analysis of Test Bars.... 217
Malleable Iron, Changes During Annealing 30
Malleable Iron, European and American Processes 8
Malleable Iron, History of, in Europe.... 8
Malleable Iron, Judging by Fracture..... 237
Malleable Iron Practice, Swedish..... 8
Malleable Iron, Results of Repeated Annealing 216
Malleable Iron, Table of Tests..... 217
Malleable Iron Test Bars, Fractures of.... 216
Malleable Iron, Tests of..... 10
Malleable Stove Plate, Producing..... 91
Malleablizing, Theory of..... 30
Manganese as a Deoxidizer in Bronze..... 253
Manganese Bronze 20
Manganese Bronze Chips..... 22
Manganese Bronze Scrap..... 22
Manganese in Brass and Bronze..... 252
Manganese Steel Castings..... 243
Marine Engine Cylinders..... 68
Martin Fox Memorial Fund..... 275
Match-Plate Process, McPhee..... 278
Meeting of the Institute of Metals..... 73
Meetings, Foundrymen's 107
Melting Crucible Steel..... 146
Melting Difficulties 240
Melting Non-Ferrous Metals with Gas..... 253
Melting Process 32
Melting Record, A 97-Hour, Cupola..... 241
Melting Steel in the Cupola..... 107
Melting Steel Scrap..... 52
Melting Tin Cans 240
Metal Dross Economy Co., Description of Dross Skimming Device..... 38
Metal for High Pressure Castings..... 221
Metal Stock Rack..... 280
Metal Melting Furnace..... 38
Metal Melting Furnace, Direct Pouring... 229
Metal Scrap, Extruded..... 22
Metal Slags, Analysis of..... 28
Metallography in the Brass Foundry..... 77
Methods of Making Skeleton Patterns..... 156
Methods of Molding Brass Bushings..... 250
Mine Car Wheels 50, 272
Missouri Malleable Iron Co.'s Foundry, Description of 91
Mixture, Cylinder 24
Mixture for Acid-Resisting Bronze..... 271
Mixture for Bearing Metal..... 164
Mixture for Brake Shoes 134
Mixture for Brass Couplings..... 227
Mixture for Brass Fittings..... 20
Mixture for Car Brasses..... 271
Mixture for Chilling Iron for Grinding Burrs 214
Mixture for Gray Iron for Bedstead Work. 114
Mixture for Gun Metal..... 227
Mixture for High Grade Babbitt..... 227
Mixture for Mine Car Wheels..... 272
Mixture for Oil Sand Match..... 15
Mixture for Pattern Bronze..... 122
Mixture for Phosphor Bronze..... 162
Mixture for Phosphor Bronze, Data Sheet No. 76, October, 1910
Mixture for Strong Iron..... 125
Mixture of Yellow Brass..... 271
Mixtures, Crucible Steel..... 42
Mixtures for Aluminum Alloys..... 181
Mixtures for Bronze Condenser Heads.... 123
Mixtures for Cast Iron Hardening Pots... 64

Mixtures for Cheap Alloys..... 227
Mixtures for Chilled Rolls..... 204
Mixtures for Cupola Malleable Iron..... 204
Mixtures for Cylinders..... 127
Mixtures for Journal Bearings..... 122
Mixtures for Phosphor Bronze..... 165
Mixtures for Plumbers' Brass Goods, Data Sheet No. 75, October, 1910.
Mixtures for Valves and Fittings..... 121
Mixtures for Cast Iron..... 54
Mixtures for Steam Metal..... 124
Modern Coremaking Machines..... 113
Modern Foundry Layouts, Typical—I.... 47
Modern Foundry Layouts, Typical—II... 109
Modern Foundry Layouts, Typical—III.. 173
Modern Foundry Layouts, Typical—IV... 245
Modern Steel Foundry, A..... 13
Mold Drying Oven, Gas Burner for..... 14
Mold Drying Track in Cast Iron Pipe Shop..... 189
Molders' Tools..... 12
Molding a Bronze Sleeve..... 251
Molding and Casting Locomotive Main Frames..... 137
Molding a Branch Pipe in Dry Sand..... 151
Molding Machine for Thin, Deep Castings. 176
Molding Machine, No-Shock Jolt Ramming 131
Molding Machine, Pneumatic Rock-Over.. 183
Molding Machine, Portable Pneumatic.... 129
Molding Machines in the Plant of the Falk Co., Milwaukee..... 58
Molding Thin, Deep Castings on a Jolt-Ramming Molding Machine..... 176
Molds, Oil-Coated..... 133
Monel Metal, Casting Large Propellers in. 69
Monel Metal, Composition of..... 70

N

National Cash Register Co., Description of Finishing and Plating Department..... 1
New Brass Furnace, A..... 171
New Idea in Phosphor Bronze..... 251
Nickel, Alloy of, With Cobalt an dChromium..... 17
Nickel and Chromium..... 18
Nickel, Cobalt and Chromium Alloys, Resistance to Corrosion of..... 19
Norcross Jolt-Ramming Core Machine.... 236
No-Shock Jolt-Ramming Molding Machine. 131

O

Obermayer Co.'s Exhibit of Foundry Machinery..... 182
Obituary:—
Childs, Otis H..... 83
Corbin, Philip H..... 179
Hansell, David H..... 83
Spies, Albert..... 37
Ohio Sand Blast Tumbling Barrel..... 232
Oil-Coated Molds..... 133
Oil Melting Furnace, Description of..... 39
Oil Sand Match, How to Make..... 15
Order System, A Simple Foundry..... 65
Osborn Convention..... 279
Osborn Mfg. Co., Description of Jolt-Ramming Molding Machine..... 176
Oven for Melting Wax from Molds..... 268
Oven, Sectional and Plan Views of Core.. 247
Over-Annealing Malleable Iron Castings, Results of..... 239
Oxidation of Aluminum..... 225
Oxide in Copper..... 24

P

Pacific Coast Foundry Industry..... 274
Pattern Bronze..... 122
Pattern Construction, Elements of—IV... 96
Pattern Construction, Elements of—V.... 147
Pattern Construction, Elements of—VI... 209
Patterns for Automobile Work..... 157
Patterns for Molding Machines..... 157
Pawling & Harnischfeger, Description of Grab Bucket..... 129
Paxson Exhibit..... 276
Personal 37, 83, 127, 179, 236, 276
Philadelphia Foremen's Meeting..... 214
Phosphor Bronze..... 270
Phosphor Bronze Castings..... 165
Phosphor Bronze, Mixture for, Data Sheet No. 76, October, 1910.
Phosphor-Tin, Photo-Micrograph of..... 78
Phosphor Bronze Turbine Rings..... 161
Phosphorus in Cast Iron..... 142
Phosphorus, Yellow..... 85
Photographing Gun Metal Specimens..... 79
Physical Properties of Cast Iron, The. 51,104 141
Pickling Castings..... 146
Pig Iron, The Valuation of..... 55
Pin Holes in Aluminum..... 225
Pipe Flask, Side Elevation and Longitudinal Section of..... 193
Pipe Foundry, Continuous Cast Iron..... 187
Pipe Molding Machine, Sectional View of. 193
Piston Rings..... 254
Pit Furnaces..... 76
Pitted Castings..... 269
Plan of Combined Gray Iron and Steel Foundry..... 172
Plan of Continuous Cast Iron Pipe Shop. 188
Plaster of Paris, Methods of Mixing and Pouring Core Boxes..... 168
Plating Brass Castings..... 1
Plumbers' Brass Goods, Mixtures for, Data Sheet, No. 75, October, 1910.
Plumbers' Solder..... 20
Pneumatic Rock-Over Molding Machine.. 183
Porosity, Cause of in Iron Castings..... 145
Porous Castings..... 150
Portable Furnace..... 132
Portable Pneumatic Power-Ramming Molding Machine..... 129
Portland Bronze & Crucible Steel Foundry, Portland, Ore., Description of Plant.... 158
Pots, Hardening..... 64
Pouring Aluminum Bronze..... 260
Pouring Molds for Cast Iron Water Pipe.. 187
Pouring Wax in a Plaster of Paris Mold.. 266
Preparation of Coke Samples, The..... 159
Preparing Core Sand..... 40
Preparing Coke Samples for Analysis..... 160
Press for Cabbaging Scrap..... 131
Pridmore Co., Edward A..... 132
Pridmore, Edward A., Description of Draw Molding Machine..... 234
Pridmore, Henry E., Core Molding Machine 43
Pridmore, Henry E., Settlement of Estate. 204
Process of Casting Crucible Steel..... 61
Producing Malleable Stove Plate..... 91
Production and Use of Foundry Coke.... 200
Production of Copper-Alloy Castings by the Lost Wax Method..... 263
Profiling Machines..... 3
Progressive Aluminum Foundry, A..... 116
Propellers, Casting of..... 70

Q

Quickly-Made Core Boxes..... 272

R

Rapid Cooling of Gun Metal..... 80
Rational Melting of Aluminum..... 226
Record Card for Patterns..... 65
Red Brass for Small Castings, Data Sheet No. 79, December, 1910.
Refining Cupola..... 134
Reformatory, Course in Foundry Practice at the Illinois State..... 102
Regenerative Crucible Steel Melting Furnace..... 61
Relation of Composition of Cast Iron to Shrinkage..... 141
Reproducing a Casting at Small Expense.. 177
Retouching a Wax Reproduction of a Pattern..... 265
Rigidity of Cast Iron..... 105
Rock-Over Drop Machines..... 114
Rock-Over Drop Molding Machine, New Pridmore..... 87
Rock-Over Molding Machine, Pneumatic.. 183
Rockwell Furnace Co.'s Direct Pouring Furnace, Description of..... 229
Roll-Over Machines..... 242
Roll-Over, Power-Ramming Core Molding Machine..... 84
Round and Square Test Bars for Malleable Iron..... 215
Rubidium..... 163
Run-Out Stopper..... 280

S

Sand and Clay Grinding Pans..... 197
Sand Blast Tumbling Barrel..... 232
Sand Dryer..... 281
Sand Matches..... 145
Sand Mixing and Blending Plant for Steel Foundries..... 235
Sand Mixing and Rolling Machines..... 184
Sand, Preparing Core..... 40
Scale in Gray Iron..... 63
Scleroscope Tests of Copper Alloys..... 124
Scrap, Judging Brass..... 21
Scrap Aluminum..... 122
Scrap Bearings..... 270
Scrap Pile, The Brass—I..... 21
Scrap Pile, The Brass—II..... 118
Scrap Pile, The Brass—III..... 169
Segregation of Iron..... 145
Semi-Steel..... 107
Separator, Dross..... 39
Shaking Out Cast Iron Pipe with an Electric Traveling Crane..... 191
Shanafelt Mfg. Co., Chaplets..... 83
Shore Scleroscope, The..... 35
Shot in Cast Iron.....125, 236
Shrinkage Chart..... 114
Shrinkage of Alloys.....73, 121
Shrinkage of Cast Iron..... 107
Shrinkage of Manganese Steel Castings... 244
Shrinkage Strains in Cast Iron..... 145
Side Elevation of Pipe Molding Machine. 199
Silicon and Titanium..... 89
Silicon, Downward Progression of, in Malleable Iron Castings..... 238
Slags, Color of..... 29
Slags, Cupola..... 28
Small Air Compressors for Heavy Duty... 233
Small Brass Foundry, Plan of..... 175
Small Cupola, A..... 101
Skeleton Patterns, The Utility of..... 156
Skimming Device, Dross..... 38
Slow Melting..... 155
Socket Core in Bottom of Flask For Pipe Molding..... 193
Sodium in Brass..... 119
Solder, Plumbers'..... 20
Sponginess in Brass Castings..... 150
Spongy Gear Hubs..... 244
Squeezers..... 242
Statuary Bronze, Data Sheet No. 82, January, 1911.
Steam Metal for Valves and Fittings..... 121
Steel Casting Plant, A Large Milwaukee.. 57
Steel Castings, Gases in..... 133
Steel Castings, Job Shop for Light..... 205
Steel Castings, Manganese..... 243
Steel Castings, Use of Vanadium in..... 137
Steel, Crucible..... 101
Steel, Crucible Casting Process..... 61
Steel Foundry, A Modern..... 13
Steel Foundry in the Northwest, A Crucible 158
Steel Foundry, The Business Man in..... 56
Steel Lined Pit for Casting Large Propellers..... 69
Steel, Melting in the Cupola..... 107
Steel, Mixtures of Crucible..... 42
Steel Scrap, Melting..... 52
Steel, Welding Cast Iron to..... 160
Stems, Bronze Valve..... 76
Sterro-Metal, Mixture for..... 271
Stopper for Run-Outs..... 280
Stove Plate, Producing Malleable..... 91
Stripping Plate and Turn-Over Molding Machines..... 234
Stripping Plate Machines..... 114
Straight Floor Cast Iron Wheel Foundry, Plan of..... 173
Stretch of Cast Iron..... 141
Strong Iron 68, 125
Sullivan Machinery Co.'s Air Compressors, Description of..... 223
Surface on Casting, Graphitic..... 50
Swartwout Ventilator..... 133
Swedish Malleable Iron Practice..... 8
System, A Simple Foundry Order..... 65

T

Tank for Skimming Drosses..... 38
Teeth for Gear Patterns..... 160
Temperature for Casting Bronze..... 80
Temperature Measurements..... 81
Tensile Strength and Elongation of Bronze 269
Tensile Tests of Tough Pitch Copper..... 118
Test Coupons on Steel Castings..... 154
Thermit Reaction..... 171
Tin Babbitt..... 227
Titanium and Silicon..... 89
Titanium in Brass..... 119
Tools, Molders'..... 12
Tough and Elastic Cast Iron..... 105
Tough-Pitch Copper..... 226
Tough-Pitch Copper, Impurities in..... 117
Trade Notes 44, 89, 133, 236, 281
Trade Outlook 36, 83, 126, 178, 228, 274
Trade Publications 134, 185, 282
Trolleys, Foundry Equipped with..... 277
Turbine Blower..... 88

U

Uniform Cupola Charges..... 202
Union Steel Casting Co., Description of Foundry..... 137
United States Ship Florida, Monel Propellers for..... 71
Use of Burning Iron for Making Patterns. 149
Use of Phosphorus..... 80
Use of the Strickle..... 213
Use of Vanadium in Steel Castings..... 137
Utility of Skeleton Patterns, The..... 156
Utilization of Cast Iron Borings..... 220

V

Valuation of Pig Iron, The..... 55
Valves and Fittings, Gating Brass..... 120
Valves and Fittings, High Pressure..... 124
Valves, Iron and Steel..... 60
Valve Cores, Making in One Piece..... 123
Valve Stems..... 76
Valve with Flanged Ends..... 165
Vanadium in Steel Castings..... 137
Ventilator, Swartwout..... 133

W

Wax Method, Production of Castings by the Lost 263
Wax Reproduction of a Statuette..... 264
Webb Mfg. & Supply Co., Power-Ramming Molding Machine 130
Weights of Iron Castings, Formulas for Finding the, Data Sheets Nos. 83 and 84, February, 1911.
Welding Cast Iron to Steel..... 160
West Steel Casting Co., Description of Plant. 205
Wheels, Mine Car 50
White Brass, Data Sheet No. 80, December, 1910.
White Iron 249
Worm Wheel Gear Pattern..... 99

Y

Yankee Party, The..... 275
Yellow Brass Castings from an Embossed Card 223
Yellow Brass for Sand Castings, Data Sheet No. 77, November, 1910.
Yellow Brass for Steering Wheels..... 271
Yellow Phosphorus 85
Yellow Prussiate of Potash, Use of..... 164

Z

Zinc Babbitt 16
Zirconia Sand 181
Zirconium 181

Authors' Index to Volume XXXVII

September 1900 --- February 1911

Alexander, John, Molding Machine versus Hand Molding 242

B

Baxter, B., Reproducing a Casting at Small Expense. 177
Bleyer, Cliff M., The Production of Copper-Alloy Castings by the Lost Wax Method 263
Blume, G. A., Swedish Malleable Iron Practice 8
Bragg, Chas. T., Brass Foundry Progress. 71

C

Carpenter, H. C. H., Brass Castings for High Pressures 255
Chadsey, S. B., Malleable Annealing Experiments 215
Custer Jr., Edgar Allen, A 97-Hour Cupola Melting Record 241

D

Deysher, Howard C., Molding Branch Pipes in Dry Sand..... 151
Dwyer, P., A Word About the Cupola... 95

E

Eagan, Daniel F., Modern Coremaking Machines 113
Edwards, C. A., Brass Castings for High Pressures 255
Estep, H. Cole, A Modern Steel Foundry. 13
Estep, H. Cole, Producing Malleable Stove Plate 92

G

Gearhart, J. A., Inspecting Iron and Steel Castings 153
Gebhart, John W., The Business Man in a Steel Foundry 56
Gertenback, Aug., Teeth for Gear Patterns. 160

H

Haynes, Elwood, Alloys of Nickel and Cobalt with Chromium..... 17
Horner, Joseph, Elements of Pattern Construction—IV 97
Horner, Joseph, Elements of Pattern Construction—V 147
Horner, Joseph, Elements of Pattern Construction—VI 209
Horton, J., Convention of British Foundrymen 26

I

Ibach, Fred, A Burning-on Job..... 24
Ireland, W. S., The Preparation of Coke Samples 159

J

Jacobson, John, Utilization of Cast Iron Borings 220
Johnson, F. E., Manganese Steel Castings. 243

K

Keep, W. J., A Small Cupola..... 101
Keep, W. J., Blow-Holes from Chills.... 114
Keep, W. J., Cupola Charging..... 96
Keep, W. J., Defective Cylinders..... 67
Keep, W. J., Different Grades of Iron from One Heat..... 64
Keep, W. J., Dull Iron..... 244
Keep, W. J., Graphitic Surface on Castings. 50
Keep, W. J., Gray Iron Mixture for Bedstead Work..... 114
Keep, W. J., Limestone as a Flux..... 181
Keep, W. J., Machinery Castings..... 116
Keep, W. J., Melting Difficulties..... 240
Keep, W. J., Mine Car Wheels..... 50
Keep, W. J., Scale in Gray Iron..... 63
Keep, W. J., Shrinkage Chart..... 114
Keep, W. J., Slow Melting..... 155
Keep, W. J., Spongy Gear Hubs..... 244
Keep, W. J., Strong Iron..... 68

L

Linton, J. H., The Valuation of Pig Iron. 55
Lucas, F. B., A Progressive Aluminum Foundry 115
Lucas, Frank B., Making Patterns for Brass Valves..... 166
Luhrsen, Louis, Casting Bronze on Iron. 168

M

Moldenke, Richard, Cupola Malleable..... 204
Moldenke, Richard, Judging Malleable Iron by Fracture 237
Moldenke, Richard, Malleable Castings.... 55
Moorhouse, J. R., The Utility of the Skeleton Pattern..... 156
Muntz, George, A Simple Foundry Order System 65

O

O'Quill, Darby, Inartistic Fillets—How to Avoid Them..... 11

P

Porter, John J., Physical Properties of Cast Iron..... 141
Porter, John J., The Physical Properties of Cast Iron..... 51
Porter, John J., The Physical Properties of Cast Iron..... 104
Primrose, H. S., Metallography in the Brass Foundry 77

S

Shed, N. W., A Chilling Mixture..... 214
Shed, N. W., Cast Iron Liners..... 171
Shed, N. W., Chilled Castings..... 134
Shed, N. W., Chilled Rolls 204
Shed, N. W., Cylinder Mixture 24
Shed, N. W., Fractured Cast Iron Ring... 240
Shed, N. W., Hardening Pots 64
Shed, N. W., Marine Engine Cylinders... 68
Shed, N. W., Mine Car Wheels..... 272
Shed, N. W., Piston Rings..... 254
Shed, N. W., Strong Iron 125
Shed, N. W., White Iron..... 249
Smerling, Carl, The Crucible Steel Casting Process—III..... 61
Stang, E. R., Automobile Cylinder Cores.. 63
Stevenson, L. C., Course in Foundry Practice at the Illinois State Reformatory.. 102
Storm, B., Making Globe Valve Cores in One Piece 123

T

Tooth, L. F., Melting Non-Ferrous Metals with Gas 253
Tryon, W. L., Formulas for Finding the Weights of Iron Castings, Data Sheets Nos. 83 and 84, February, 1911.

V

Vickers, C., Blemishes on Brass Castings. 222
Vickers, C., Easy Lessons in Chemistry 23, 72, 170, 261
Vickers, C., Finishing and Plating Brass Castings 2
Vickers, C., Methods of Molding Brass Bushings 250
Vickers, C., Molding and Casting Large Bronze Rings. 161
Vickers, C., Molding Brass Axle Bearings for Electric Cars..... 15
Vickers, C., The Brass Scrap Pile—II.... 118
Vickers, C., The Brass Scrap Pile—III... 169

Z

Zeller, Frank R., Gating Brass Valves and Fittings. 120
Zimmerman, Louis P., A Crucible Steel Foundry in the Northwest..... 158

Data Sheets

Volume XXXVII

Nos. 73 and 74, September, 1910.—Formulas for Finding the Weights of Iron Castings.
No. 75, October, 1910. — Mixtures for Plumbers' Brass Goods.
No. 76, October 1910.—Phosphor Bronze.
No. 77, November, 1910.—Yellow Brass for Sand Castings.
No. 78, November, 1910.—Bronze for Machinery Castings.
No. 79, December, 1910.—Red Brass for Small Castings.
No. 80, December, 1910.—White Brass.
No. 81, January, 1911.—Babbitt Metal.
No. 82, January, 1911.—Statuary Bronze.
Nos. 83 and 84, February, 1911.—Formulas for Finding the Weights of Iron Castings.